## NOTE ON A NEW DECAPODOUS CRUSTACEAN, PROSOPON ETHERIDGEI, H. WOODW., FROM THE CRETACEOUS OF QUEENSLAND.

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Communicated, with a Note on the same, by R. Etheridge, Junr.

(Plate iv.)

Having been desired by my friend Mr. Robert Etheridge, Junr., of the Australian Museum, Sydney, to compare the drawing of the carapace of a new crustacean, from the Cretaceous beds of Queensland, I have much pleasure in stating the result of my examination of the figure of this interesting form. There is no recent crab with which I am acquainted sufficiently like the Queensland fossil to institute a satisfactory comparison, unless the recent genera Dorippe and Homola may serve the purpose; but there are several fossil forms so closely resembling it as to leave no doubt in my mind in referring it to the Prosopoidea\* of Reuss and to the genus Prosopon† of Von Meyer.

The forms which most closely resemble the Australian crab are the *Prosopon verrucosum*, Reuss (*Op. cit.*, p. 21, taf. iv. fig. 31), from the Neocomian of Boucherans in the Department of the Jura; *Prosopon aculeatum*, Meyer (Palaeontographica, 1860, taf. xxiii, fig. 24); *P. ornatum*, Meyer (*Op. cit.* figs. 25, 26); *P. Heydeni*,

<sup>\*</sup> Prof. Dr. August Reuss, Zur Kenntniss fossiler Krabben: Denkschrift. der Math. Naturwiss. Classe der k. k. Akademie der Wissenschaften, XVII. Band, 12 Nov. 1857. Wien 1859 (24 plates & pp. 90, 4to).

<sup>†</sup>H. von Meyer, Jarhbuch für Mineralogie, 1835, p. 329. Neue Gattungen fossiler Krebse, aus gebilden vom Bunter Sandstein bis in die Kreide. Taf. I-IV. pp. 28. Stuttgart 1840, 4to. Palaeontographica, Decr. 1860. Bd. VII. Th. 4, pp. 183-222, Taf. xxii

Meyer (Op. cit., figs. 27 and 28); P. aequum, Meyer (Op. cit., fig. 29); P. torosum, Meyer (Op. cit., fig. 30); P. paradoxum, Meyer (Op. cit., fig. 31); and P. tuberosum, Meyer (Op. cit., fig. 33). With the exception of the last-named species, which is from Boucherans, these are all from the White Jura of the Oerlinger Thal, in Würtemburg.

I have also figured and described a species belonging to the genus Prosopon (P. mammillatum, H. Woodw.), from the Great Oolite of Stonesfield, near Oxford (see Geol. Mag., 1868, Vol. v. pl. I. fig. 2, pp. 3-5). In noticing this species I have endeavoured to analyse the series of twenty-nine species of Prosopon described by H. von Meyer in the Palaeontographica, 1860, and have pointed out that certain of these forms do not belong to the genus Prosopon, but should be relegated to the Pinnotherida under the genus Plagiophthalmus of Bell.\* Into this genus should be removed all those forms at present included under the genus Prosopon, which have "an evenly egg-shaped carapace with the front slightly produced and bent downwards, the surface nearly smooth, and marked by two shallow transverse furrows, nearly parallel to each other, the orbits very small, elongate-oval, and placed obliquely within the margin, appearing as if pierced in the substance of the carapace." (Bell, Op. cit. p. 9.)

Plagiophthalmus, Bell, would thus probably include within it the following species of H. von Meyer's genus Prosopon, namely, Prosopon hebes, P. simplex, P. rostratum, P. spinosum, P. elongatum, P. depressum, P. obtusum, P. stotzingense, P. subleve, P. læve, P. punctatum.† The following are doubtful: P. insigne, P. æquilatum, P. marginatum, P. grande, P. excisum, and P. lingulatum. They all occur merely as small detached carapaces without appendages, and the underside of the fossil usually

<sup>\*</sup>See Prof. Bell's Monograph on the Fossil Malacostracous Crustacea from the Gault and Greensand (Palæontographical Society's Vol. xiv. for 1860), Part ii. p. 9, pl. 11.

<sup>†</sup> I now retain Prosopon tuberosum, formerly excluded by me.

adheres firmly to the matrix, and is therefore seldom to be seen or studied.

The new form, from the Cretaceous beds of Queensland, may be thus described:—

Carapace, or cephalothorax—general form oval, truncated behind; the cephalic, gastric, hepatic and cardiac regions covered with smooth wart-like excrescences; the branchial regions "quadrant"-shaped and tuberculated; the branchial furrow, separating the hepatic, cardiac, and branchial regions, strongly marked; the nuchal furrow, separating the frontal and orbital regions from the hepatic, is less marked. Length along the median line of the carapace, 40 millimetres; greatest breadth of carapace, 35 mm.; breadth of posterior border, 28 mm.

The frontal, or cephalic portion of the carapace is rounded, and but very slightly prominent, and is marked by two smooth, sub-central, elongated, wart-like prominences on the median line. their extremities forming the obtuse rostrum, and flanked by three or four smaller rounded tubercles irregularly disposed over the orbital region. The orbits are not distinctly marked. Immediately behind the frontal (rostral) swellings, are four smooth, elongated, rounded, sub-central prominences, upon the epigastric region, the two inner ones being narrow and ridge-like, with their longer axes parallel to the median line, and the two outer ones lying parallel to them, but larger and more oval in outline; behind these again and marking the median line, and the centre of the gastric region, is a single, small, smooth, rounded tubercle, flanked by two sub-central, transversely-elongated, somewhat elliptical prominences (like eyes), each having a small tubercle upon its summit; these are followed by two other similar sub-median, transversely-elongated prominences, widest next the median line, each (like the preceding pair) bearing an eye-like tubercle on its centre. The gastric region is bounded behind by a narrow, transversely-elongated, crescent-shaped prominence, the horns of which are directed slightly forward and bearing a single tubercle upon its centre. The hepatic region is marked by one

large oval prominence projecting on either side upon the hepatic border, and three lesser wart-like elevations on the left side, and two rather larger ones on the right side, which skirt the branchial furrow. The cardiac region occupies the median line between the two large branchial lobes, and is marked by a large peg-top-shaped swelling, having the slender point directed towards the posterior border and separated by a deep clear-cut furrow from the branchial, hepatic, and gastric regions. The branchial regions are roughly quadrant-shaped, having the arc of the quadrant directed forward and inward towards the median line and the cardiac region; the sides and surface are somewhat inflated, and the posterior border is straight and marked by the line of articulation with the abdomen, which by its great breadth indicates that the individual was a female. The branchial region of the carapace is covered with small rounded pustules or tubercles, evenly distributed over the surface. There is a trace on the matrix behind the carapace, which indicates the remains of the abdomen.

Affinities and Differences.—This Queensland crustacean carapace offers points of close affinity with Prosopon verrucosum, Reuss, and P. tuberosum, Von Meyer, both Neocomian species from the Cretaceous of Boucherans, Dept. Jura. It differs from both these forms in its more rounded contour, its more prominent branchial regions, as well as in the general and well-marked distinctive arrangement of the lobes marking the several regions of the carapace.

There can, however, be no doubt that there is a relationship between these forms and the genus *Dromilites* of the London Clay; we must, however, wait for information as to the appendages before venturing to say more. Meantime, I dedicate this Queensland fossil to my old friend and colleague, Robert Etheridge, Junr., naming it *Prosopon Etheridgei* in compliment to one who has contributed so much to our knowledge of the Palæontology of Australia.

## APPENDIX.

NOTE ON QUEENSLAND CRETACEOUS CRUSTACEA.

## By R. Etheridge, Junr.

No Crustacean has been described from the Queensland Cretaceous rocks up to the present time, but I am in the temporary possession of another specimen from the Queensland Museum collection, in addition to the present species, through the kindness of the Curator, Mr. C. W. De Vis, M.A. This will be further referred to.

Prosopon Etheridgei, H. Woodw., was presented to the Queensland Museum by Mr. H. St. George, and although without precise locality, its general appearance and mode of preservation is so manifestly that of the large Inocerami from the Flinders River, that I think the specimen may be said, without much doubt, to come from somewhere in the Central Queensland Cretaceous area. It is on the weathered surface of a concretionary buff-coloured nodule of limestone. It will therefore appertain to the Lower Series of the Queensland Cretaceous, or the "Rolling Downs Series."

The second specimen appears to be a portion of one of the large chelæ of a Macrourus Decapod, and is preserved in a blue-grey concretionary limestone, much resembling that of the Walsh River District, and therefore from the same division of the Cretaceous as *P. Etheridgei*. I have not yet succeeded in determining this fossil, but it seems to accord better with the structure of the family Astacomorpha, or that of the Thalassinidæ, than with that of any others.

The first Cretaceous Crustacean found in Australia was by Mr. Norman Taylor, who acted as Geologist to W. Hann's North Queensland Exploring Expedition in 1872. The fossil comes from the Mitchell River, and is perhaps identical with one thus referred

to by Mr. Taylor in a letter to Mr. R. L. Jack, Government Geologist for Queensland. He says:-"In a creek, a short distance to the north-east of camp 81 (return journey), there occur large quantities of ironstone nodules, in one of which I discovered a fine and very perfect Crustacean, which, however, appears to have been lost, as it was not noticed by Mr. Etheridge, Senr., when describing the collection," \* Had it not been the mention of the ironstone nodule, I should have concluded that this second specimen in the Queensland Museum was Mr. Taylor's long lost fossil, and it may even yet prove to be so. In a letter recently received from that gentleman he remarks that it was an "imperfect body and claw, like a lobster, but small and very little bigger than a large prawn," which is certainly rather the appearance of the specimen. At any rate, there now remains the obvious fact that representatives of both the Brachyura and Macrura existed in the Queensland Cretaceous seas.

<sup>\*</sup> i.e., the Daintree collection. See Geol. and Pal. Queensland and New Guinea, by R. L. Jack and R. Etheridge, junr., in lit. p. 391.